

REMARKS

In this Response, Applicant amends claims 1, 19, 23-25, and 28. Claims 1-14 and 16-30 are currently pending, of which claims 1, 19, 23, 24, 25 and 28 are independent. No new matter has been added. Support for the claim amendments can be found in Applicant's specification at least at page 5, lines 23-29 and page 10, lines 11-23.

I. Claim Amendments

Claims 1, 19, and 24 have been amended to recite that the code is executable to simulate the simulatable block diagram model. Support for the claim amendments can be found in Applicant's specification at least at page 5, lines 23-29 and page 10, lines 11-23. No new matter has been added.

Claim 23 has been amended to recite that the preview of the code is presented in a coding format different from a coding format of the code for the block. Support for the claim amendment can be found at least at page 13, lines 17-23 of Applicant's specification. No new matter has been added.

Claim 25 has been amended to recite that the preview of the code is created by a predictor mechanism which emulates how the code would appear if the code were generated by an execution engine. Support for the claim amendment can be found at least at page 13, line 31 – page 14, line 6 of Applicant's specification. No new matter has been added.

Claim 28 has been amended to recite, in part, automatically updating a portion of the preview of the code, an updated portion of the preview of the code being presented in a format different from an un-updated portion of the preview of the code. Support for the claim amendment can be found at least at page 13, lines 11-16 of Applicant's specification. No new matter has been added.

II. Rejection of Claims 1-5, 7-14, 16-24, and 28-30 under 35 U.S.C. § 103(a)

In the Office Action, claims 1-5, 7-14, 16-24, and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent Publication Number 2004/0034846 to Ortal (hereafter "Ortal") in view of United States Patent Number 7,367,028 to Kodosky et al.

(hereafter “Kodosky”). Applicant respectfully traverses the 35 U.S.C. § 103(a) rejection of claims 1-5, 7-14, 16-24, and 28-30 as set forth below.

A. Claim 1

Independent claim 1 recites:

“In a graphical modeling environment, a method comprising:
receiving a user request to define a parameter or a setting of
a block in a simulatable block diagram model;
in response to the user request, *generating a preview of
code representative of code for the block prior to generation of
code for the simulatable block diagram model, the code for the
simulatable block diagram model being executable to simulate
the simulatable block diagram model*; and
displaying the preview of the code on a graphical user
interface.” [emphasis added]

Applicant respectfully submits that Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest at least the following feature of independent claim 1: “generating a preview of code representative of code for the block prior to generation of code for the simulatable block diagram model, the code for the simulatable block diagram model being executable to simulate the simulatable block diagram model.”

In this Office Action, the Examiner correctly acknowledges (Office Action, paragraph 4):

“Ortal does not explicitly teach generating preview of code prior to generation of code for the block diagram model.”

However, the Examiner asserts (Office Action, paragraph 4):

“However, Kodosky teaches such a preview was known in the pertinent art, at the time applicant’s invention was made, to “allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied (i.e. col. 6 lines 20-34).”

Ortal does not disclose or suggest “generating a preview of code representative of code for the block prior to generation of code for the simulatable block diagram model, the code for the simulatable block diagram model being executable to simulate the simulatable block diagram model,” as recited in claim 1. The teachings of Kodosky do not supplement Ortal in such a way as to cure the failure of Ortal to disclose or suggest the above feature of claim 1.

Kodosky relates to configuration diagrams for configuring systems (Kodosky, column 2). A configuration diagram represents a system, e.g. a distributed system (Kodosky, column 2). The configuration diagram may include device icons that represent devices in the system, store information associated with the devices, and display connections between the device icons (Kodosky, column 2). A user may deploy programs to devices by graphically associating program icons with device icons in a configuration diagram (Kodosky, column 5, lines 15-17). In one embodiment, a preview window may allow the user to view proposed changes to a configuration diagram prior to the change being committed or applied (Kodosky, column 6, lines 21-32).

The preview window in Kodosky is silent with respect to a preview of code, and does not allow a preview of code, as required by claim 1.

The configuration diagram discussed in Kodosky is a diagram representing devices in a distributed system. In contrast, the code required by claim 1 is code relating to a block in a simulatable block diagram model, and the code for the simulatable block diagram model is executable to simulate the simulatable block diagram model. Although Kodosky discusses generating a preview of a configuration diagram, Kodosky does not disclose or suggest “generating a preview of code... the code for the simulatable block diagram model is executable to simulate the simulatable block diagram model,” as recited in claim 1.

Furthermore, neither Ortal nor Kodosky provides any disclosure, teaching or suggestion on how the preview of a configuration diagram of Kodosky could be modified to arrive at a preview of code as required by claim 1.

For at least the reasons set forth above, Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest each and every element of claim 1. Accordingly,

Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claim 1 under U.S.C. § 103(a).

B. Claims 2-5, 7-14, and 16-18

Claims 2-5, 7-14, and 16-18 depend from claim 1 and, as such, incorporate each and every element of claim 1. Therefore claims 2-5, 7-14, and 16-18 are allowable for at least the same reasons discussed above for claim 1. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claims 2-5, 7-14, and 16-18 under U.S.C. § 103(a).

C. Claim 19

Independent claim 19 recites:

“In a graphical modeling environment, a method comprising:
automatically updating a preview of code representative of code for a block in a simulatable block diagram model in response to a user altering a parameter or a setting of the block, the code being executable to simulate the simulatable block diagram model; and
displaying the updated preview of the code on a graphical user interface.” [emphasis added]

Applicant respectfully submits that Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest at least the following feature of independent claim 19: “automatically updating a preview of code representative of code for a block in a simulatable block diagram model in response to a user altering a parameter or a setting of the block, the code being executable to simulate the simulatable block diagram model.”

A combination of Ortal and Kodosky does not disclose or suggest generating a preview of code... the code being executable to simulate a simulatable block diagram model. As such, a combination of Ortal and Kodosky also does not disclose or suggest “updating a preview of code... the code being executable to simulate a simulatable block diagram model,” as recited in claim 19.

For at least the reasons set forth above, Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest each and every element of claim 19. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claim 19 under U.S.C. § 103(a).

D. Claims 20-22

Claims 20-22 depend from claim 19 and, as such, incorporate each and every element of claim 19. Therefore claims 20-22 are allowable for at least the same reasons discussed above for claim 19. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claims 20-22 under U.S.C. § 103(a).

E. Claim 23

Independent claim 23 recites:

“A computer-readable storage medium for use with an electronic device having a processor, the medium storing instructions executable by the processor of the electronic device, the medium storing:

one or more instructions for receiving a user request to define a parameter or a setting of a block in a simulatable block diagram model;

one or more instructions for generating a preview of code in response to the user request, the generating the preview occurring prior to generating code for the block diagram model using an execution engine, the preview of the code representative of code for the block, where the preview of the code is presented in a coding format that differs from a coding format of the code for the block; and

one or more instructions for displaying the preview of the code on a graphical user interface.” [emphasis added]

Applicant respectfully submits that Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest at least the following feature of independent claim 23: “one or more instructions for generating a preview of code in response to the user request, the generating the preview occurring prior to generating code for the block diagram model using an execution engine, the preview of the code representative of code for the block, where the preview of the code is presented in a coding format that differs from a coding format of the code for the block.”

Ortal does not disclose or suggest generating a preview of code, as required by claim 23. Ortal also does not discuss a coding format of a preview of code and, more specifically, does not disclose or suggest a “preview of the code being presented in a coding format that differs from a coding format of the code for the block,” as recited in claim 23. The teachings of Kodosky do not supplement Ortal in such a way as to cure the failure of Ortal to disclose or suggest the above feature of claim 23.

Kodosky discusses generating a preview of a configuration diagram, but does not disclose or suggest generating a preview of code, as required by claim 23. Kodosky also does not discuss a coding format of a preview of code and, more specifically, does not disclose or suggest a “preview of the code being presented in a coding format that differs from a coding format of the code for the block,” as recited in claim 23.

For at least the reasons set forth above, Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest each and every element of claim 23. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claim 23 under U.S.C. § 103(a).

F. Claim 24

Independent claim 24 recites:

“A computer-readable storage medium for use with an electronic device having a processor, the medium storing instructions executable by the processor of the electronic device, the medium storing:

one or more instructions for automatically updating a preview of code representative of code for a block in a simulatable block diagram model in response to a user altering a parameter or a setting of the block, the code being executable to simulate the simulatable block diagram model; and

one or more instructions for displaying the updated preview of the code on a graphical user interface.” [emphasis added]

Independent claim 24 is a medium claim corresponding to independent claim 19. Applicant respectfully submits that claim 24 is allowable for the same reasons set forth above during the discussion of claim 23.

G. Claim 28

Independent claim 28 recites:

“A system for generating and displaying a graphical programming application, comprising:
 user-operable input means for inputting data to the graphical programming application;
 a display device for displaying a simulatable block diagram model;
and
 an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, the computer program instructions including instructions for:
 receiving a first datum altering a setting of a first portion of the simulatable block diagram model,
 in response to the first datum, generating a preview of code representative of code for the first portion prior to generation of code for the simulatable block diagram model,
 receiving a second datum altering a setting of a second portion of the simulatable block diagram model,
 in response to the second datum, automatically updating a portion of the preview of the code, the updated portion of the preview of the code being presented in a format that differs from an un-updated portion of the preview of the code.” [emphasis added]

Applicant respectfully submits that Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest at least the following feature of independent claim 28: “in response to the second datum, automatically updating a portion of the preview of the code, the updated portion of the preview of the code being presented in a format that differs from an un-updated portion of the preview of the code.”

Ortal discusses that a user can rename a class (Ortal, paragraph 0125). A code manager 401 can invoke a code generator 402 to regenerate files 412-415 in response to the user renaming the class (Ortal, paragraph 0125). The code view 411 is then updated to reload the modified files which can then be displayed (Ortal, paragraph 0125).

Ortal discusses updating the code view 411, but does not disclose or suggest presenting “an updated portion of a preview of code” “in a format that differs from an un-updated portion of the preview of code,” as recited in claim 28. The teachings of Kodosky do not supplement Ortal in such a way as to cure the failure of Ortal to disclose or suggest the above feature of claim 28.

Kodosky discusses generating a preview of a configuration diagram, but does not disclose or suggest presenting “an updated portion of a preview of code” “in a format that differs from an un-updated portion of the preview of code,” as recited in claim 28.

For at least the reasons set forth above, Ortal and Kodosky, alone or in any reasonable combination, fail to disclose or suggest each and every element of claim 28. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claim 28 under U.S.C. § 103(a).

H. Claims 29 and 30

Claims 29 and 30 depend from claim 28 and, as such, incorporate each and every element of claim 28. Therefore claims 29 and 30 are allowable for at least the same reasons discussed above for claim 28. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claims 29 and 30 under U.S.C. § 103(a).

III. Rejection of Claims 6 and 25-27 under 35 U.S.C. § 103(a)

In the Office Action, claims 6 and 25-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ortal in view of Kodosky and further in view of United States Patent Number 6,175,948 to Miller (hereafter “Miller”) (Office Action, paragraph 5). Applicant respectfully traverses the 35 U.S.C. § 103(a) rejection of claims 6 and 25-27 as set forth below.

A. Claim 6

Claim 6 depends from and includes the features of claim 1.

Applicant respectfully submits that Ortal, Kodosky and Miller, alone or in any reasonable combination, fail to disclose or suggest “in response to the user request, generating a

preview of code representative of code for the block prior to generation of code for the simulatable block diagram model, the code for the simulatable block diagram model being executable to simulate the simulatable block diagram model,” as recited in independent claim 1.

A combination of Ortal and Kodosky does not disclose or suggest “generating a preview of code... the code for the simulatable block diagram model being executable to simulate the simulatable block diagram mode,” as recited in claim 1. The teachings of Miller do not supplement Ortal and Kodosky in such a way as to cure the failure of Ortal and Kodosky to disclose or suggest the above feature of claim 1.

Miller relates to a waveform compiler method that employs top-down system decomposition coupled with component based design development (Miller, abstract). Miller discusses capturing user designs by generating parameterized models based on reusable components.

However, Miller does not disclose or suggest “generating a preview of code... the code for the simulatable block diagram model being executable to simulate the simulatable block diagram model,” as recited in claim 1.

For at least the reasons set forth above, Ortal, Kodosky and Miller, alone or in any reasonable combination, fail to disclose or suggest each and every element of claim 6. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claim 6 under U.S.C. § 103(a).

B. Claim 25

Independent claim 25 recites:

“A system for generating and displaying a graphical programming application, comprising:
 user-operable input means for inputting data to the graphical programming application;
 a display device for displaying a simulatable block diagram model;
 and
 an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored

computer program instructions, the computer program instructions including instructions for providing a code preview to a user on the display device, the code preview displaying a preview of code representative of code for a block in the simulatable block diagram model after the user defines a property of the block using the user-operable input means, and ***the preview of the code being created by a predictor mechanism which emulates how the code appears when the code is generated by an execution engine.***” [emphasis added]

Applicant respectfully submits that Ortal, Kodosky and Miller, alone or in any reasonable combination, fail to disclose or suggest at least the following feature of independent claim 25: “the preview of the code being created by a predictor mechanism which emulates how the code appears when the code is generated by an execution engine.”

In this Office Action, the Examiner correctly acknowledges (Office Action, paragraph 5):

“Ortal and Kodosky do not disclose that the step of generating code comprises a predictor mechanism generating an estimation of the code.”

However, the Examiner asserts (Office Action, paragraph 5):

“Miller discloses that the step of generating code comprises a predictor mechanism generating an estimation of the code (Col 7:10-25, “... User component selection... performance estimates as specified...” in an analogous system for the purpose of providing a method and apparatus for a waveform compiler that provides waveform application development, allows partitioning of that application functionality to a target architecture, and further provides a way of generating and optimizing code and ancillary target software for use in communication systems. (Miller: Col 2:10-16).”

Applicant respectfully disagrees with the Examiner’s assertion regarding Miller.

Ortal and Kodosky, alone or in any reasonable combination, do not disclose or suggest “the preview of the code being created by a predictor mechanism which emulates how the code appears when the code is generated by an execution engine,” as recited in claim 25. The teachings of Miller do not supplement Ortal and Kodosky in such a way as to cure the failure of Ortal and Kodosky to disclose or suggest the above feature of claim 25.

Miller relates to a waveform compiler method that employs top-down system decomposition coupled with component based design development (Miller, abstract). Miller discusses creating a waveform design by selecting a set of components and interconnecting them into a dataflow graph (Miller, column 7, line 1-26). User component selection is based, in part, on performance estimates as specified in the component attribute information (Miller, column 7, line 1-26).

Miller discusses **estimating the performance of a software component** in an application, but does not disclose or suggest “a predictor mechanism which **emulates how the code appears when the code is generated by an execution engine**,” as recited in claim 25. Miller addresses software performance, but does not disclose or suggest appearance of code as required by claim 25. For example, Miller does not disclose or suggest emulating the appearance of code for the software components when the code is generated by an execution engine.

For at least the reasons set forth above, Ortal, Kodosky and Miller, alone or in any reasonable combination, fail to disclose or suggest each and every element of claim 25. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claim 25 under U.S.C. § 103(a).

C. Claims 26 and 27

Claims 26 and 27 depend from claim 25 and, as such, incorporate each and every element of claim 25. Therefore claims 26 and 27 are allowable for at least the same reasons discussed above for claim 25. Accordingly, Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claims 26 and 27 under U.S.C. § 103(a).

CONCLUSION

In view of the above remarks, Applicant believes the pending application is in condition for allowance and urge the Examiner to pass the claims to allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicant's attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-081RCE. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. § 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

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Respectfully submitted,

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